

The diagram illustrates a system architecture with two units, Unit A and Unit B. Each unit contains a Link Manager (101) and a Baseband Xmitter/Receiver (103/105). Unit A's Link Manager (101) is connected to its Baseband Xmitter (103). Unit B's Baseband Receiver (105) is connected to its Link Manager (101). A signal line connects the Baseband Xmitter (103) of Unit A to the Baseband Receiver (105) of Unit B.

**FIG. 1**

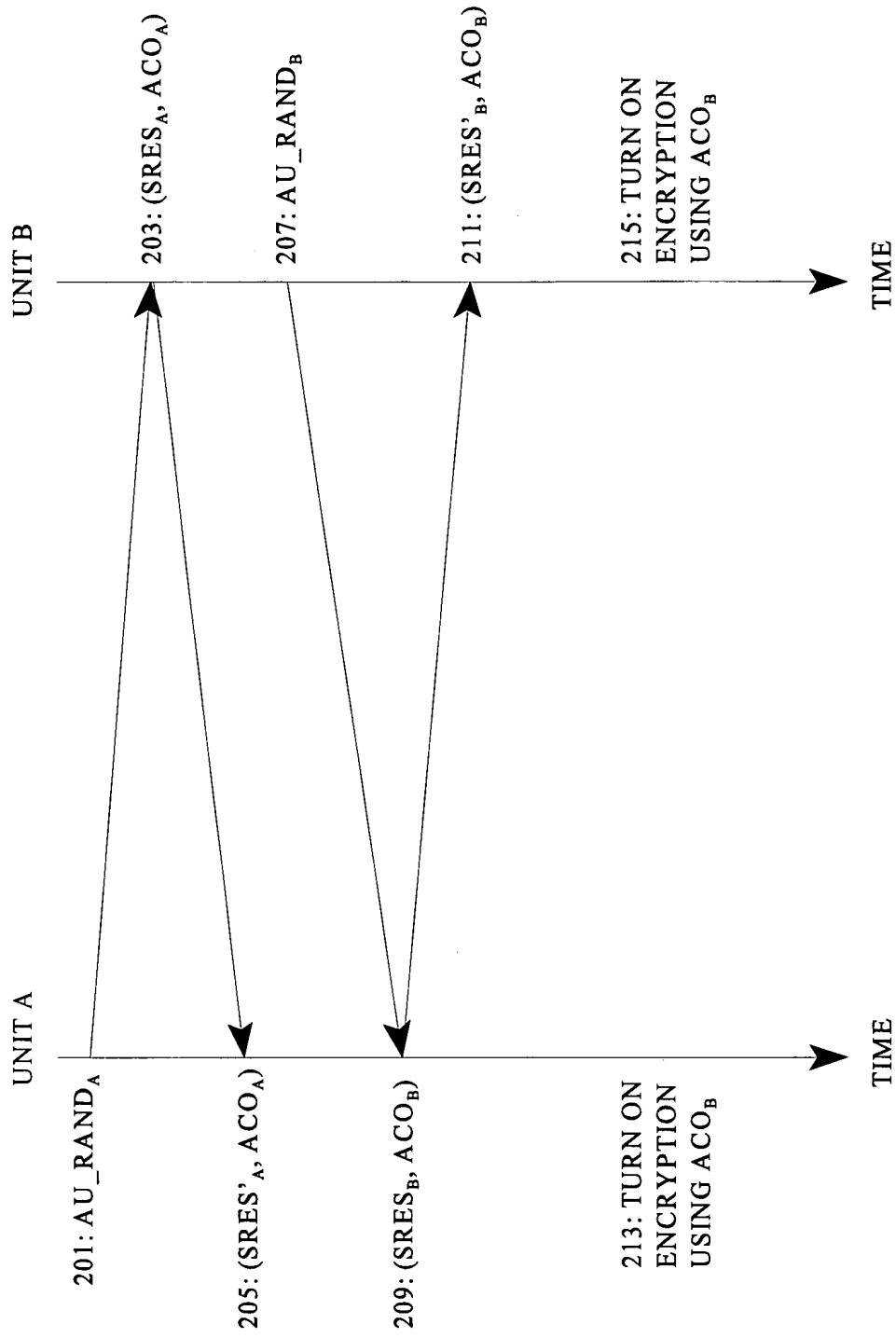


FIG. 2

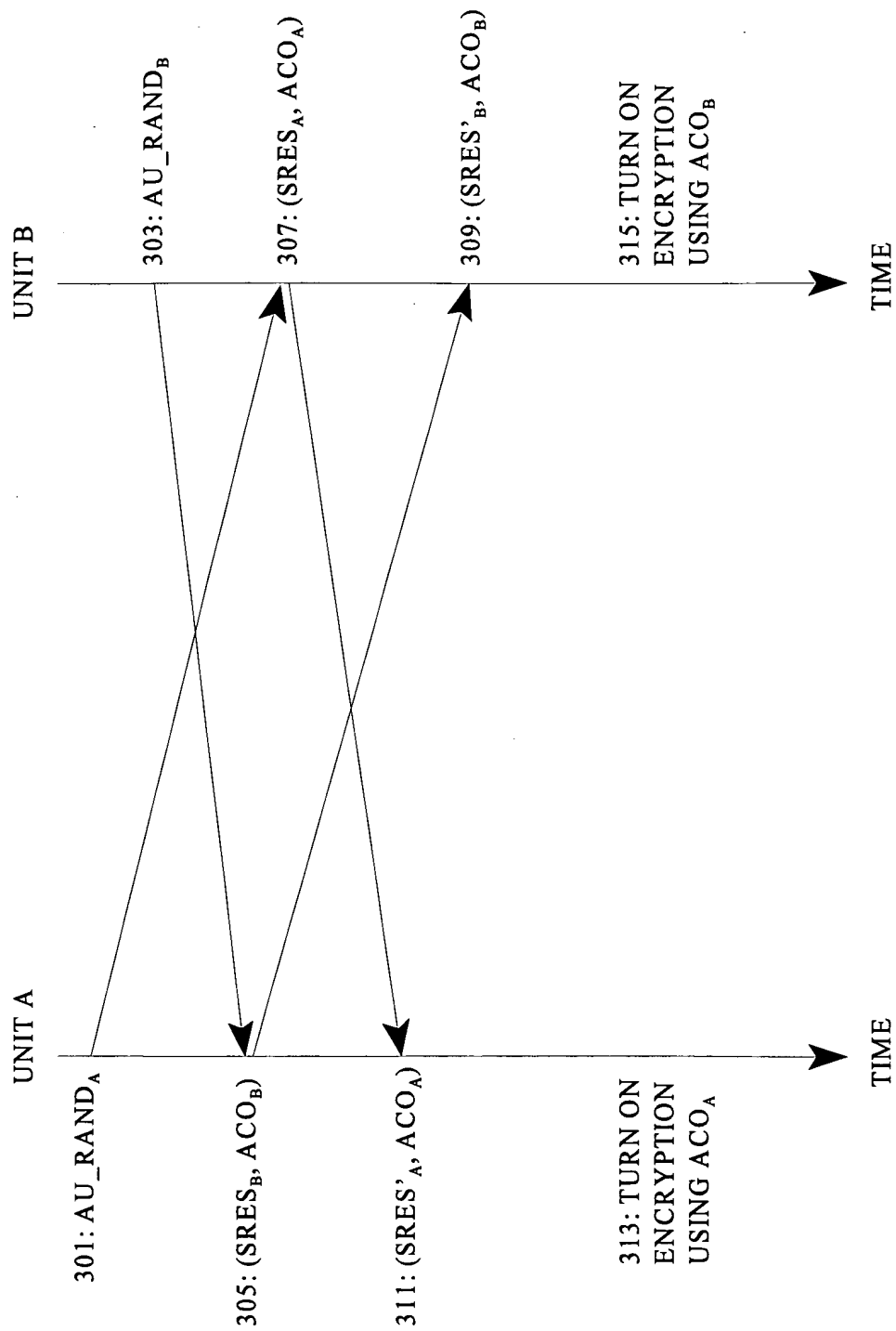


FIG. 3

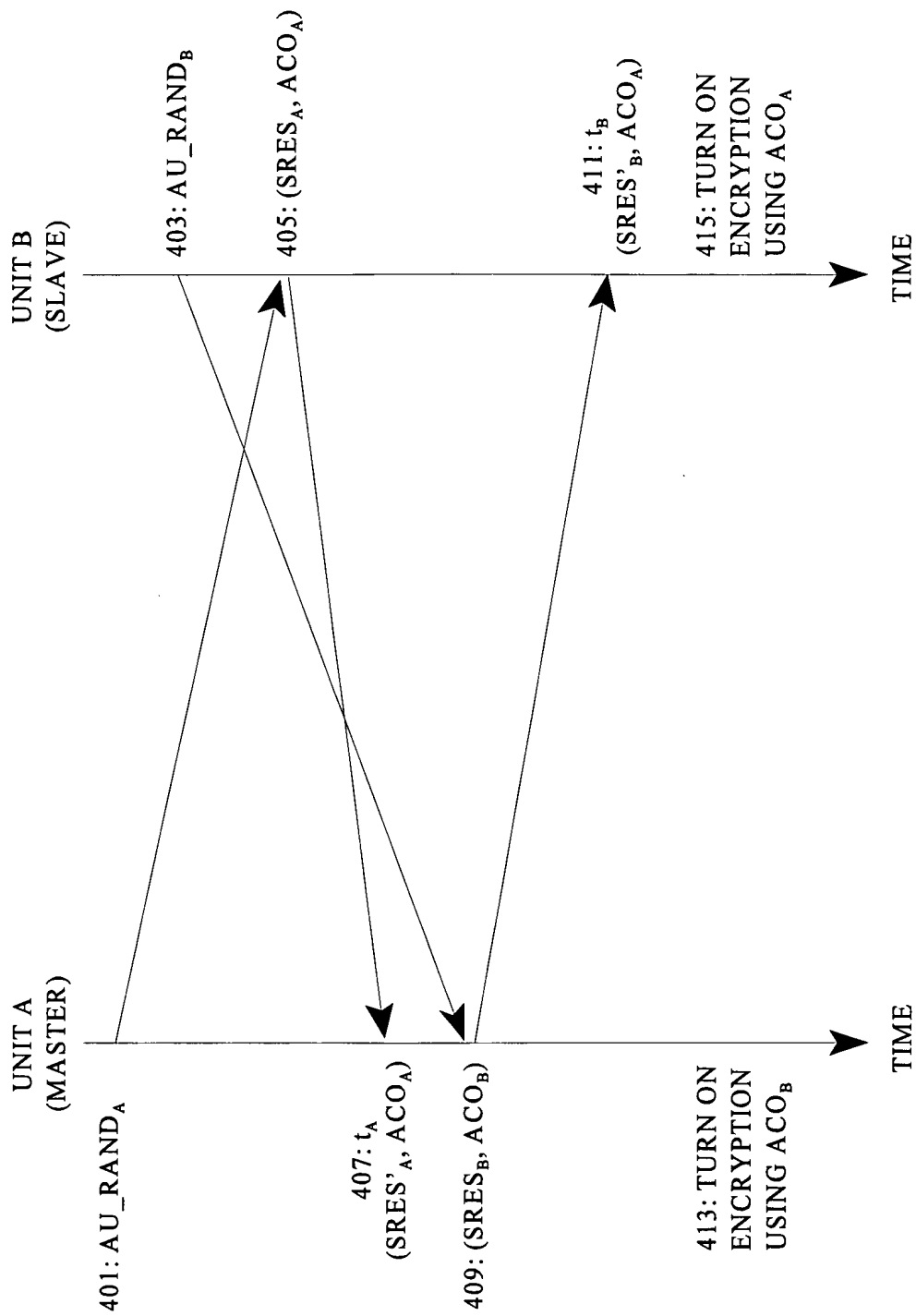
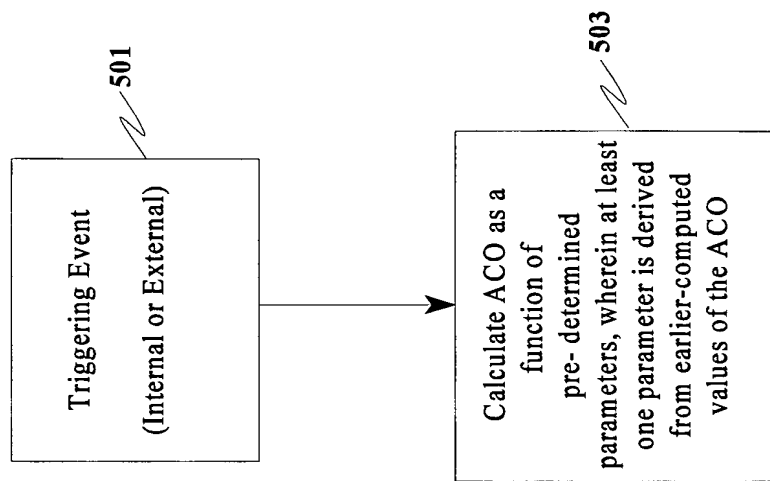


FIG. 4



**FIG. 5**

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**FIG. 6**

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sequenceDiagram
    participant A as UNIT A  
(MASTER)
    participant B as UNIT B  
(SLAVE)
    Note over A: ACO_m is in effect
    A->>B: 701: AU RAND_A
    Note over B: 703: AU RAND_B
    B->>A: 705: (SRES_A, ACO_{n+1})  
ACO_{n+1} = f(AU RAND_A, ACO_n)
    Note over A: 707: t_A, (SRES'_A, ACO_{m+1})  
ACO_{m+1} = f(AU RAND_A, ACO_m)
    A->>B: 709: (SRES_B, ACO_{m+2})  
ACO_{m+2} = f(AU RAND_B, ACO_{m+1})
    Note over B: 711: t_B, (SRES'_B, ACO_{n+2})  
ACO_{n+2} = f(AU RAND_B, ACO_{n+1})
    B->>A: 713: TURN ON ENCRYPTION USING  
ACO_{m+2} =  
f[AU RAND_A, f(AU RAND_B, ACO_m)]
    Note over A: 715: TURN ON ENCRYPTION USING  
ACO_{n+2} =  
f[AU RAND_A, f(AU RAND_B, ACO_n)]
  
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The diagram illustrates the interaction between Unit A (Master) and Unit B (Slave) for the generation and encryption of ACO values. The process is as follows:

- Initial State:** Unit A has  $ACO_m$  in effect. Unit B has  $ACO_n$  in effect.
- Message 701:** Unit A sends  $AU\_RAND_A$  to Unit B.
- Message 703:** Unit B generates  $AU\_RAND_B$ .
- Message 705:** Unit B sends  $(SRES'_A, ACO_{n+1})$  to Unit A, where  $ACO_{n+1} = f(AU\_RAND_A, ACO_n)$ .
- Message 707:** Unit A generates  $t_A, (SRES'_A, ACO_{m+1})$ , where  $ACO_{m+1} = f(AU\_RAND_A, ACO_m)$ .
- Message 709:** Unit A sends  $(SRES_B, ACO_{m+2})$  to Unit B, where  $ACO_{m+2} = f(AU\_RAND_B, ACO_{m+1})$ .
- Message 711:** Unit B generates  $t_B, (SRES'_B, ACO_{n+2})$ , where  $ACO_{n+2} = f(AU\_RAND_B, ACO_{n+1})$ .
- Message 713:** Unit B sends "TURN ON ENCRYPTION USING  $ACO_{m+2} = f[AU\_RAND_A, f(AU\_RAND_B, ACO_m)]$ " to Unit A.
- Message 715:** Unit A sends "TURN ON ENCRYPTION USING  $ACO_{n+2} = f[AU\_RAND_A, f(AU\_RAND_B, ACO_n)]$ " to Unit B.

**FIG. 7**